

**In the Claims:**

This listing of claims will replace all prior versions, and listing, of claims in the application:

1           1.       (Currently Amended) A digital image sensor, comprising:  
2                   a first two-color photo-detector ~~sensitive to a first total wavelength range, said~~  
3 ~~first two-color photo-detector~~ having a first photo-detector element capable of absorbing light  
4 within a first range of wavelengths ~~of said first total wavelength range~~ and a second photo-  
5 detector element capable of absorbing light within a second range of wavelengths ~~of said first~~  
6 ~~total wavelength range~~, said first photo-detector element being in an elevated relation with  
7 said second photo-detector element, said first photo-detector element being electrically  
8 isolated from said second photo-detector element; and  
9                   a second two-color photo-detector having a third photo-detector element  
10 capable of absorbing light within a third range of wavelengths and a fourth photo-detector  
11 element capable of absorbing light within a fourth range of wavelengths, said first, second,  
12 third and fourth range of wavelengths each being different from the other, said third photo-  
13 detector element being in an elevated relation with [[a]] said fourth photo-detector element,  
14 said third photo-detector element being electrically isolated from said fourth photo-detector  
15 element, ~~said second two-color photo-detector being sensitive to a second total wavelength~~  
16 ~~range different from said first total wavelength range.~~

1           2.       (Original)     The sensor of Claim 1, further comprising:  
2                   a substrate, said second photo-detector element being formed within said  
3 substrate.

1           3.     (Original)     The sensor of Claim 2, further comprising:  
2                     a dielectric layer between said first photo-detector element and said second  
3 photo-detector element, said dielectric layer electrically isolating said first photo-detector  
4 element from said second photo-detector element.

1           4.     (Original)     The sensor of Claim 1, wherein said first photo-detector  
2 element is formed of amorphous silicon having a thickness selected to absorb light within  
3 said first range of wavelengths and pass light within said second range of wavelengths, said  
4 second photo-detector detecting light within said second range of wavelengths passed by said  
5 first photo-detector element.

1           5.     (Original)     The sensor of Claim 1, wherein said first and second photo-  
2 detector elements are photodiodes.

1           6.     (Original)     The sensor of Claim 5, wherein said photodiodes are PIN  
2 photodiodes.

1           7.     (Currently Amended) The sensor of Claim 1, further comprising:  
2                     a color filter in an elevated relation with said first photo-detector element, said  
3 color filter absorbing light within ~~a third~~ another range of wavelengths and passing light  
4 within said first and second ranges of wavelengths.

1           8.     (Original)     The sensor of Claim 7, further comprising:  
2                     a transparent metal conductor layer between said color filter and said first  
3 photo-detector element.

1           9.     (Original)     The sensor of Claim 1, further comprising:  
2                     circuitry for driving said first photo-detector element and said second photo-  
3 detector element, said first photo-detector element being in an elevated relation with said  
4 circuitry.

1           10-12. (Canceled)

1           13.     (Original)     The sensor of Claim 12, wherein said first photo-detector  
2 element produces a first color value, said second photo-detector element produces a second  
3 color value, said third photo-detector element produces a third color value and said fourth  
4 photo-detector element produces a fourth color value, and further comprising:  
5                     a third two-color photo-detector having a fifth photo-detector element in an  
6 elevated relation with a sixth photo-detector element, said fifth photo-detector element being  
7 electrically isolated from said sixth photo-detector element, said fifth photo-detector element  
8 being capable of absorbing light within said first range of wavelengths and producing a fifth  
9 color value, said sixth photo-detector element being capable of absorbing light within said  
10 second range of wavelengths and producing a sixth color value; and  
11                     a fourth two-color photo-detector having a seventh photo-detector element in  
12 an elevated relation with an eighth photo-detector element, said seventh photo-detector  
13 element being electrically isolated from said eighth photo-detector element, said seventh  
14 photo-detector element being capable of absorbing light within said first range of

15 wavelengths and producing a seventh color value, said eighth photo-detector element being  
16 capable of absorbing light within said second range of wavelengths and producing an eighth  
17 color value.

1           14.   (Currently Amended) A digital image sensor, comprising:  
2                   a first two-color photo-detector ~~sensitive to a first total wavelength range, said~~  
3 ~~first two-color photo-detector~~ having a first photo-detector element capable of absorbing light  
4 within a first range of wavelengths ~~of said first total wavelength range~~ and a second photo-  
5 detector element capable of absorbing light within a second range of wavelengths ~~of said first~~  
6 ~~total wavelength range~~, said first photo-detector element being in an elevated relation with  
7 said second photo-detector element;  
8                   a first dielectric layer between said first photo-detector element and said  
9 second photo-detector element;  
10                  a second two-color photo-detector having a third photo-detector element  
11 capable of absorbing light within a third range of wavelengths and a fourth photo-detector  
12 element capable of absorbing light within a fourth range of wavelengths, said first, second,  
13 third and fourth range of wavelengths each being different from the other, said third photo-  
14 detector element being in an elevated relation with [[a]] said fourth photo-detector element,  
15 ~~said second two-color photo-detector being sensitive to a second total wavelength range~~  
16 ~~different from said first total wavelength range; and~~  
17                  a second dielectric layer between said third photo-detector element and said  
18 fourth photo-detector element.

1           15.    (Original)    The sensor of Claim 14, further comprising:  
2           a substrate, said second photo-detector element being formed within said substrate.

1           16.    (Original)    The sensor of Claim 14, wherein said first photo-detector  
2           element is formed of amorphous silicon having a thickness selected to absorb light within  
3           said first range of wavelengths, said second photo-detector detecting light within said second  
4           range of wavelengths passed by said first photo-detector element.

1           17.    (Currently Amended) The sensor of Claim 14, further comprising:  
2           a color filter in an elevated relation with said first photo-detector element, said  
3           color filter absorbing light within a ~~third~~ another range of wavelengths and passing light  
4           within said first and second ranges of wavelengths.

1           18.    (Original)    The sensor of Claim 17, further comprising:  
2           a transparent metal conductor layer between said color filter and said first  
3           photo-detector element.

1           19.    (Original)    The sensor of Claim 14, further comprising:  
2           circuitry for driving said first photo-detector element and said second photo-  
3           detector element, said first photo-detector element being in an elevated relation with said  
4           circuitry.

1           20-26. (Canceled).

1           27.     (Currently Amended) The sensor of Claim 1, wherein said first photo-detector  
2 element is formed of amorphous silicon having a first thickness selected to absorb light  
3 within said first range of wavelengths and said third photo-detector element is formed of  
4 amorphous silicon having a second thickness selected to absorb light within [[a]] said third  
5 range of wavelengths.

1           28.     (Currently Amended) The sensor of Claim 14, wherein said first photo-  
2 detector element is formed of amorphous silicon having a first thickness selected to absorb  
3 light within said first range of wavelengths and said third photo-detector element is formed of  
4 amorphous silicon having a second thickness selected to absorb light within [[a]] said third  
5 range of wavelengths.